

Appl. No. 10/521,058
Amdt. dated June 13, 2008
Reply to Office Action of Dec. 28, 2007

Amendments to the Drawings:

The attached drawing sheet includes changes as indicated in the remarks section of this amendment. A replacement sheet and annotated drawing sheet are attached to the end of this response.

Attachment: Replacement Sheet
 Annotated Sheet Showing Changes

REMARKS

In view of both the amendments presented above and the following discussion, the Applicants submit that none of the claims now pending in the application is anticipated under the provisions of 35 USC § 102. Thus, the Applicants believe that all of these claims are now in allowable form.

If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, the Examiner should telephone Mr. Peter L. Michaelson, Esq. at (732) 542-7800 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Specification amendments

Various amendments have been made to the specification to correct minor inadvertent grammatical, typographical, punctuation and formal errors.

To facilitate entry of these amendments, a substitute specification is submitted herewith. In accordance with the provisions of M.P.E.P. Section 608.01(q), the Applicants have also enclosed a "marked-up" copy of the specification showing these amendments. The substitute specification contains the same changes that are shown in the marked-up copy of the specification. The substitute specification introduces no new matter into the application.

Drawings

The Examiner has objected to the drawings for two reasons.

First, the Examiner stated that reference numerals "1" and "7" have both been used in the figures to designate both a port and a telecommunications network, and hence required correction. Numeral 1 refers to a network; numeral 7 refers to a port. To properly identify these two elements, the Applicants now propose to correct Fig. 1, as indicated in red, by extending the corresponding lead line such that numeral 7 references a particular port, specifically that one of ports 3 which is located farthest on the left.

Second, the Examiner stated that the control and data sections, as recited in claim 2, were not shown in Fig. 1. Though control sections 4 and voice data sections 5 are indeed shown (each of ports 3 has one of both of these sections), these sections were not specifically labeled as such and were only numerically referenced. Accordingly, the Applicants now propose to modify Fig. 1 to include appropriate textual legends which, to avoid injecting undue clutter into the figure, collectively describe all of blocks 4 and 5, the former and latter to be labeled specifically as "Control Sections (4)" and "Voice Data Sections (5)", respectively.

The proposed corrections are shown in red on the enclosed red-lined drawing sheet for Fig. 1. The Applicants

now solicit the Examiner's approval of all these corrections.

To expedite prosecution, the Applicants have also enclosed an appropriate replacement formal drawing sheet for Fig. 1 that incorporates all these corrections.

These objections should now be withdrawn.

Status of claims

To simplify the Examiner's consideration of the pending claims and thus expedite their prosecution, the Applicants, rather than re-writing the claims to include numerous changes, have instead simply cancelled all the prior claims 1-20 and substituted new claims 21-40 there for.

The following table shows the correspondence between each of the claims, as filed, and those now pending.

| Present claim | Prior claim | Present claim | Prior claim | Present claim | Prior claim |
|------------------|----------------|------------------|----------------|------------------|----------------|
| 21 | 1 | 28 | 8 | 35 | 15 |
| 22 | 2 | 29 | 9 | 36 | 16 |
| 23 | 3 | 30 | 10 | 37 | 17 |
| 24 | 4 | 31 | 11 | 38 | 18 |
| 25 | 5 | 32 | 12 | 39 | 19 |
| 26 | 6 | 33 | 13 | 40 | 20 |
| 27 | 7 | 34 | 14 | | |

Rejection under 35 USC § 102

The Examiner as rejected prior claims 1-20 under the provisions of 35 USC § 102(e) as being anticipated by the teachings of the Petty et al patent (United States patent 6,337,858 issued to D. Petty et al on January 8, 2002). Inasmuch as all these claims have now been cancelled, this rejection is moot. Nevertheless, since these claims have been replaced by new claims 21-40, then, to expedite prosecution, this rejection will be discussed in the context of these new claims and principally with respect to new independent claim 21. In that context, this rejection is respectfully traversed.

Specifically, with respect to prior independent claim 1, the Examiner believes that all its claimed features are identically disclosed in the '858 Petty et al patent. As the Examiner will soon appreciate, this view is incorrect with respect to new independent claim 21.

The '858 Petty et al patent is directed to a apparatus and an accompanying method for providing voice telecommunication calls between a user browsing the Internet and a business having an interactive web page. In essence and as described in col. 2, lines 55-58, the apparatus relies on using computer controlled telephony (CCT) hardware which is separate from the public switched telephone network (PSTN). This hardware is expressly stated in col. 4, line 22-26 as containing its own switching fabric:

"All call initiation and bridging is effected from computer telephony hardware comprising a switch fabric

and a switch controller which permits ultimate flexibility with respect to the establishment, bridging, transfer and other call operations." [emphasis added]

Furthermore, all call initiation and bridging occurs within the CCT hardware itself, as expressly stated in col. 4, lines 26-32:

"The computer telephony hardware is the originating point for each leg of a voice connection. When a user requests voice communications, at least two calls are placed. A first call over the preferred medium (phone or Voice over IP) to the user and a second call to an agent for the service subscriber. Once both calls are established they are bridged by the computer telephony hardware to provide the voice communication." [emphasis added]

FIG. 1 of this patent depicts a communications network (here being PSTN 14) to which the inventive hardware taught by the '858 Petty et al patent is connected. As shown, the hardware is formed of web server 38, computer telephony server 40, voice over IP (VoIP) gateway 42 and computer telephony hardware 44 -- all of this is external to the PSTN and typically located at an Internet Service Provider (ISP). See, col. 6, lines 57-59. Service subscriber 32, typically having one or more telephones 34 and one or more workstations 36, maintains, via ISP 12, one or more pages on web server 38 which may be accessed, via the PSTN, by client workstations 18 and 20. As indicated in FIG. 2 and discussed in col. 6, line 55 et seq, ISP 12 also contains advertisement server 46 which provides, to users, advertisements each containing a voice button. CTI server 40 controls computer telephony hardware 44, including

call setup and tear-down functions, and interfaces to VoIP gateway 42.

In operation and as discussed in col. 10, line 7 et seq and shown in accompanying FIG. 6, a user starts by browsing the web using, e.g., client workstation 18. When the user is presented with an appropriate web page via, e.g., web server 38, containing a voice button and maintained for service subscriber 32, the user can then initiate a voice call by clicking on that button. By doing so, a call request is initiated from that page and forwarded to the web server. That request may specify a preferred call completion medium, i.e., PSTN or VoIP. If that medium is not so specified, then web server 38 requests that information from the user at workstation 18. Once server 38 has this information, it then queries OAM server 52 (see FIG. 2), also situated at ISP 12, to obtain appropriate subscriber rules to determine how the call request is to be completed to service subscriber 32. Those rules are then passed to CTI server 40 which operates computer telephony hardware 44 to place a call to workstation 18. If the user has requested a VoIP connection, the CTI server sends a request to VoIP gateway 42 to make a VoIP call offer to workstation 18. Once the call offer is accepted by the user, the call is answered. Then, VoIP gateway 42 informs CTI server 40 that the call has been answered and, in turn, that server informs web server 38 that the connection is complete. Server 38 then forwards call alert information to workstation 36 of subscriber 32 which will "pop" up call alert window 82 (see Fig. 5) on that workstation. Server 38 then passes information to CTI server 40 to enable a call to service subscriber 32. If the service subscriber has

specified that the call to it be completed via PSTN 14 to one of telephones 34, then CTI server 40 initiates a PSTN call using a trunk link and a PRI interface to the PSTN. A PRI packet is sent over the trunk to the PSTN which then completes the call to one of telephones 34 in a conventional manner. When the call is answered at that telephone, server 40 informs web server 38 that the call is answered. Server 38 then instructs CTI server 40 to join, i.e., bridge, the two calls together such that actual conversation, between the user at client workstation 18 and a party at telephone 34 of service subscriber 32, can then ensue. Thus, the first leg of this entire call (which can also be viewed as a "half call") is a VoIP connection, while the second leg of this entire call (being a second "half call") is a PSTN voice connection. Once the call is concluded, the telephone 34 will disconnect which causes disconnection of client workstation 18. The latter disconnect is effected by CTI server 40 which requests VoIP gateway 42 to disconnect the associated VoIP session.

The present Applicants recognize, in page 2, line 29 et seq of the present application, that this approach taught by the '858 Petty et al patent provides a high degree of flexibility in controlling each leg of a call and thus facilitates implementation of new call routing services. But, as the Applicants note, this flexibility comes with a significant deficiency: since switch fabric is rather expensive, this approach, which specifically relies on using switch fabric external to the PSTN, is likely to be quite costly and thus experience rather limited use.

Realizing this rather serious deficiency, the Applicants have devised an inventive approach which relies on the PSTN to implement the call establishment, routing and bridging functions and thus eliminates any need to include any switch fabric external to the PSTN and the high cost attendant thereto.

In particular, and in sharp contrast to the teachings of the '858 Petty et al patent, the present invention relies on using an external computer to communicate control information directly to the PSTN such that the establishment, routing and bridging of half calls all occur within the PSTN itself. See, e.g., page 3, line 9 et seq of the present application. Inasmuch as the computer apparatus controls these processes but relies on the PSTN itself, rather than any external switch fabric, to actually implement each of these processes, the inventive apparatus dispenses with any need to utilize any external switch fabric. In light of widespread proliferation of computer networks and computer-based user communications, such an approach is particularly advantageous in implementing telecommunications services where standard telecommunications switches can be controlled through an external computer environment (e.g., a LAN or WAN, the latter exemplified by the Internet) but without a need for a so-called "intelligent network" (IN) system to be otherwise interposed between the switch and the computer environment - particularly since IN systems tend to be costly and of limited functionality. The computer apparatus is not constrained by preprogrammed service implementations within either the telecommunications switch itself or any such IN system. In effect, the computer apparatus implements a

highly flexible control adjunct but one which relies on the call handling capabilities of the switch and the entire PSTN itself but is not bound by all the call processing limitations in either. By effectively delegating actual call handling functionality to the switch and more generally the PSTN, the inventive apparatus eliminates any need to duplicate any of that functionality external to the PSTN in a switching adjunct -- as is the case in the apparatus taught by the '858 Petty et al patent. Thus, the inventive apparatus provides an approach to implementing telecommunications services using standard telecommunications switches, but controlled through an external computer environment, that is extremely flexible and yet very cost-effective.

Specifically, as shown in FIG. 1 of the present application and as described on page 6, line 25 et seq thereof, computer apparatus 10 is illustratively connected to control section 4 of each of ports 7 and 8 of switch fabric 2 located within PSTN 1. All the ports on fabric 2 are collectively referenced as ports 3, with each such port having both control section 4 and voice data section 5. Each control section passes connection control data involving that port, while each voice section passes voice data. Bridging circuit 6, also situated within the PSTN, can span voice data sections 5 of ports 7 and 8. Within ports 3, each of ports 9 communicates with either further switch fabric 15, e.g., another switching system, or one of peripheral apparatus 16.

In operation, computer 10 communicates with ports 7 and 8 and, by providing appropriate instructions to

those ports, controls calls or connections made through each of these ports. The computer can instruct each port to establish a half call through either a further switching fabric or to one of peripheral apparatus 16 with those half calls, once established, then being bridged together through use of bridging circuit 6 to form a complete connection. Computer 10 issues commands to the control sections of the various ports using the same signaling protocols as are employed within switch fabric 2 itself.

Moreover and as described in page 10, line 17 et seq and with reference to Fig. 2, the computer can be configured to intercept control commands from one control section of one port on a first switch (e.g., switch 19) that are destined to another such section on a port of a second switch (e.g., switch 20). If these commands are associated with normal traffic, i.e. not requiring any of the services implemented by computer 10, then the computer will simply pass these commands between these two ports. Alternatively, if the commands are those required by computer 10 to implement any such service, then computer 10 interprets the command accordingly to furnish a then requested service.

The Applicants' reliance on, and broad inventive concept, of using the call establishment, switching and bridging capabilities of the PSTN itself, but controlled through an external computer apparatus, lies directly contrary to the explicit teachings in the '858 Petty et al patent.

New independent method claim 21 contains suitable limitations that clearly and explicitly recite this and

other distinguishing features of the present invention.
This claim recites as follows, with those recitations shown
in a bolded typeface:

"A system for controlling a telecommunications
network comprising:

**a first switch fabric, situated within the
telecommunications network**, for controlling connections
in the telecommunications network; the first switch
fabric having:

first and second ports; and
third and fourth ports each connected to
either a second switch fabric, situated within the
telecommunications network, or a corresponding one of a
plurality of peripheral apparatus;

**a bridging circuit contained within the
telecommunications network** and connected between the
first and second ports; and

**a computer apparatus arranged to communicate with
the first port for controlling a first connection
between the bridging circuit and a first one of the
peripheral apparatus and to communicate with the second
port for controlling a second connection between the
bridging circuit and a second one of the peripheral
apparatus such that, as a result of communication
between the computer apparatus and first switch fabric,
the first and second connections, are established and
bridged by and within the telecommunications network."**
[emphasis added]

Highly similar recitations appear in new independent
counterpart method claim 36.

With the above in mind, the '858 Petty et al
patent simply does not teach, show or suggest, whether
explicitly or let alone implicitly, the expressly claimed
feature of using a computer apparatus to communicate with
first and second ports of a switch fabric, in order to
control connections made through each of those ports and
bridge those connections together, through a bridging

circuit, where the switch fabric and the bridging circuit are all situated within the network, such that the connections are established and bridged within the network itself.

Further, given that this claimed feature lies directly opposite to the explicit teachings in the '858 Petty et al patent and those teachings do not suggest any other alternative than that expressly taught, it stands to reason that no one skilled in the art, who might have been faced at the time of the present invention with the same problem which the Applicants addressed and were also supplied with those same teachings, would have contemplated or even just been led towards a solution, as now claimed, which lies directly contrary to those teachings. Thus, it has remained for the Applicants and only the Applicants to have recognized their inventive solution.

Thus, in the sheer absence of this claimed feature, among others, in the teachings of the '858 Petty et al patent, the Applicant submits that neither claims 21 nor 36 is anticipated by those teachings. Accordingly, each of these claims is patentable under the provisions of 35 USC § 102(e).

Each of new dependent claims 22-35 and 37-40 depends, either directly or indirectly, from new independent claim 21 or 36, respectively, and recites further distinguishing aspects of the present invention over those recited in the corresponding independent claim. Hence, the Applicants submit that each of these new dependent claims is also not anticipated by the teachings of the '858 Petty et

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al patent for the exact same reason set forth above with respect to claim 21. Consequently, each of these new dependent claims is also patentable under the provisions of 35 USC § 102(e).


Accordingly, this rejection should now be withdrawn.

Conclusion

Consequently, the Applicants believe that all their pending claims are presently in condition for allowance. Accordingly, both reconsideration of this application and its swift passage to issue are earnestly solicited.

Respectfully submitted,

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Signature

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Reg. No.



Fig. 1